

City of Waterville
DEPARTMENT OF PUBLIC WORKS
6 Wentworth Court
Waterville, Maine 04901-4892

TEL (207) 680-4744 FAX (207) 877-7532

REQUEST FOR BIDS

**HEAVY DUTY DIESEL POWERED 4X2 PLOW TRUCK (37,000 GVW MINIMUM) WITH
ACCESSORY EQUIPMENT**

DATE: March 31, 2020

INSTRUCTIONS TO BIDDERS

- 1. GENERAL:** The City of Waterville is accepting bids for a 4X2 PLOW TRUCK (37,000 GVW MINIMUM) meeting the specifications accompanying this document.
- 2. BID SUBMITTAL:** Sealed bids will be accepted by the Office of the Director of Public Works, 6 Wentworth Court, Waterville, Maine 04901 up to and including 10:00 A.M. local time, on Tuesday, April 28, 2020 at which time they will be publicly opened and read. All bids will be placed in a sealed envelope clearly marked "Bid – 4X2 PLOW TRUCK 37,000 GVW w/ACCESSORY EQUIPMENT" in the center with the bidder's name and address in the upper left-hand corner.
- 3. WITHDRAWAL OR REVISION OF BID:** A bidder may withdraw or revise a bid after it has been received by the Office of the Director of Public Works, provided the request is made in writing or in person before the time set for bid opening.
- 4. BID AWARD:** Bid award, if the City determines to award, will be made within thirty (30) calendar days after bid opening, to the lowest responsible bidder whose bid most closely complies with all the requirements specified contingent upon approval by the City Council. The City reserves the right to reject any and/or all bids without absorbing any liability against the City.
- 5. Evaluation of Bids:** For purposes of evaluating the bids, in the event of any discrepancies on a proposal between an amount written out in words verses the same amount expressed in numbers, the amount written in words shall govern (if applicable). Similarly, unit prices shall prevail over extended totals. In the event of Additive Bid Items, the "low bid" shall be based upon the least total for the highest combination of bid items which may be awarded within the Control Amount (i.e. a predetermined budget amount to be disclosed at the time of bid opening). In the event that all Base Bids exceed the Control Amount, the "low bid" shall be based solely upon the lowest Base Bid submitted. Bidders shall examine and familiarize themselves with the Specifications and Bid Documents. The bidder shall in no way be relieved of any obligation to provide the product, service and/or equipment specified through error, mistake or omission.
- 6. INTERPRETATION OF ADDENDA:** It shall be the bidder's responsibility to make inquiry as to any interpretation of the specifications or requirements of the participants. Any changes in the specifications shall be by written addenda.
- 7. SPECIFIED QUANTITY:** One (1) Unit
- 8. INVOICES AND PAYMENT:** Invoices shall be transmitted to the City of Waterville, 1 Common Street, Waterville, Maine 04901-6699. It is the practice of the City of Waterville to pay invoices within thirty (30) days of receipt. The City is exempt from State of Maine Sales Tax.

- 9. **PENALTY CLAUSE:** N/A
- 10. **INSURANCE:** N/A
- 11. **PERFORMANCE BOND:** N/A

12. **CANCELLATION:** The City reserves the right to cancel any unfulfilled portion of the Contract if, in the opinion of the City, the services or materials supplied are unsatisfactory or are not in compliance with the terms and conditions of the specifications. Cancellation shall be effective following ten (10) calendar days written notice to the Bidder

13. **EXCEPTIONS TO SPECIFICATIONS:** These instructions to Bidders and General Paragraphs are an integral part of the Specifications for a 4X2 PLOW TRUCK (37,000 GVW MINIMUM) w/ACCESSORY EQUIPMENT and will be binding on the Bidder. Bidders are advised that they shall be bound to the requirements of the Specifications, Instructions to Bidders and General Paragraphs unless exceptions are otherwise clearly noted in the Proposal. Any exceptions shall be considered, however, in determining the most acceptable proposal.

14. **INQUIRIES:** Any questions concerning this bid request should be directed to Fred Dechaine (fdechaine@waterville-me.gov), Department of Public Works, 6 Wentworth Court, Waterville, Maine 04901. Telephone inquiries can be made by calling (207) 680-4746 between the hours of 7:00 AM & 3:00 PM Monday thru Friday.

15. **GENERAL PARAGRAPHS:** See attached Bid Specifications.

SPECIFICATIONS
HEAVY DUTY DIESEL POWERED 4X2 PLOW TRUCK (37,000 GVW MINIMUM)

1. **ENGINE:**
 - 1.1 Minimum 275 HP Cummins diesel
 - 1.2 800-foot pounds of torque minimum
 - 1.3 Designed for heavy-duty service
 - 1.4 Oil Cooler
 - 1.5 Magnetic drain plug
 - 1.6 Spicer coupler 2-2-329 on crankshaft
 - 1.7 Engine oil dipstick and fill tube must be easily accessible without tipping hood
 - 1.8 Engine Block Heater
2. **TRANSMISSION:**
 - 2.1 3500RDS Allison© transmission for heavy-duty service with oil cooler
 - 2.2 Push button, electronic shift control, dash mounted
 - 2.3 Torque input rating shall be in excess of maximum available engine torque output
 - 2.4 Designed for heavy-duty service
 - 2.5 Transmission and fill tube must be easily accessible without tipping hood
3. **AXLE FRONT:**
 - 3.1 Rated capacity 14,000 lbs. minimum
 - 3.2 Designed for heavy-duty service
 - 3.3 Ample tire clearance at maximum turning angle
 - 3.4 Front suspension 14,600 lbs. Minimum
 - 3.5 Oil lubricated front hubs with synthetic gear lube
 - 3.6 Right hand spring assist to accommodate 2,000 lb. wing plow weight (no air bag)
4. **AXLE REAR:**
 - 4.1 Rated capacity 23,000 lbs. minimum
 - 4.2 Mode of rear end housing RS23-186 or equivalent with synthetic gear lube
 - 4.3 Aluminum house and/or lightweight components not acceptable
 - 4.4 Single, dual and triple tire chain clearance mandatory, no local modifications or special spacer acceptable
 - 4.5 Magnetic drain plug
 - 4.6 Rear suspension 26,000 lbs. with helper springs
 - 4.7 Drive controlled differential lock that automatically disengages at speeds over 25 mph
5. **FRAME:**
 - 5.1 Designed for heavy-duty service
 - 5.2 Full depth, full length channel frame rails
 - 5.3 120,000 PSI frame rails with section modulus 21.98 minimum
 - 5.4 Heavy-duty gusseted cross members shall be provided to prevent "diamond shaping" under extreme conditions. Local modifications not acceptable.
 - 5.5 Rear tow plate – 25 Ton Pintle Hook
6. **WHEELBASE:**
 - 6.1 Wheelbase shall be the manufacturer's shortest standard version offered to meet service requirements to accommodate hydraulic system and a 10' dump body.
 - 6.2 Cab to axle and wheel-base to be coordinated by dealer and body co.

7. BRAKE SYSTEM:

- 7.1 Full air actuations, S Cam type with outbound brakes, self-adjusting wedge type not acceptable.
- 7.2 13.2 cu. ft. compressor, minimum
- 7.3 Compressor shall be lubricated through engine lube system
- 7.4 Reservoir 25000 cu. in. capacity, minimum
- 7.5 Drain cocks on each reservoir
- 7.6 Reservoirs shall have ample road and tire chain clearance
- 7.7 Moisture ejection valve
- 7.8 Bendix AD-IP© or equivalent Air dryer with spin on cartridge
- 7.9 Automatic low-pressure spring brake, 40 PSI or less
- 7.10 Low pressure alarm systems
- 7.11 16 ½ x 7" x ¾" brakes, rear axle
- 7.12 Standard brakes front axle
- 7.13 Parking brake, one valve parking brake system with warning light
- 7.14 ABS air brake system

8. SUSPENSION SYSTEM:

- 8.1 Heavy-duty spring suspension designed to support plow and R.H. wing in travel position and under full ballast load, with no appreciable spring sag or deflection either side
- 8.2 Spring shackles and mounting brackets shall be designed for extreme service
- 8.3 Front springs shall have a rated capacity of 14,600 lbs.
- 8.4 Front helper springs (or acceptable equal) shall be provided to support plow apparatus weight, and so designed as to provide good riding characteristics when traveling unladed
- 8.5 Rear springs shall have a rated capacity of 13,000 lbs. with rear stabilizer bar each at pad minimum including helper springs; helper spring shall be single leaf helper spring
- 8.6 Heavy-duty double-acting shock absorbers front axles

9. PERFORMANCE:

- 9.1 Not more than 5mph in lowest forward gear at maximum engine RPM
- 9.2 Maximum speed in highest forward gear at maximum engine governed RPM shall be approximately 50 mph
- 9.3 Gear steps designed to eliminate lugging of the engine

10. WHEELS AND TIRES:

- 10.1 Wheels shall be 10 hole hub piloted
- 10.2 Heavy duty rims tubeless type
- 10.3 1100R225 16 ply radial tubeless tires, front and rear drive wheels for mud and snow
- 10.4 Tires shall be premium grade, first line quality
- 10.5 Spare front and rear tire & rim

11. CAB AND SHEET METAL:

- 11.1 Heavy-duty closed cab, with BBC 106"
- 11.2 Vehicles with pickup-style cab or van-type cab are unacceptable
- 11.3 Engine and doghouse intrusion must be kept to an absolute minimum
- 11.4 Conventional hood design, butterfly type; tilt hood design
- 11.5 Cloth Seats: drive; air-ride, passenger; non-air-ride; seat covers
- 11.6 Insulated floor mat and cab silencer insulation
- 11.7 AM/FM Radio
- 11.8 Gray Interior
- 11.9 Stationary Grill
- 11.10 Electric windows
- 11.11 Air Conditioner
- 11.12 Dual Windshield wipers with delay settings and electric washers
- 11.13 Class A strobe light(s) mounted on cab roof

12. STEERING SYSTEM:

- 12.1 Designed for heavy-duty service
- 12.2 Ample gear reduction for off-highway service
- 12.3 Hydraulic power steering
- 12.4 Large capacity hydraulic oil reservoir equipped with filter located for ease of service

13. EXHAUST SYSTEM:

- 13.1 Extra heavy-duty horizontal exhaust system with down spout
- 13.2 Heavy-duty mounting brackets, elbow, piping, and expansion joints

14. COOLING SYSTEM:

- 14.1 Radiator core and shell shall be of heavy design and construction; bolted tanks preferred
- 14.2 Ample capacity for continuous high engine output under extreme operating conditions with sight gauge
- 14.3 Heavy-duty mounting brackets and plumbing
- 14.4 Thermostatic controls
- 14.5 Engine thermostat

15. ELECTRICAL SYSTEM:

- 15.1 12 volt alternator system, 130 amps capacity, minimum
- 15.2 Heavy-duty starter, 41 mt series minimum
- 15.3 Heavy-duty batteries, 1900 cca, 155 amp hour rating minimum
- 15.4 Enclosed battery compartment
- 15.5 Batteries shall be shielded from road splash
- 15.6 Standard cab marker lights
- 15.7 Conventional seal beam headlights
- 15.8 Standard panel lights
- 15.9 All exterior wire shall be salt-resistant type
- 15.10 Dome light shall have independent switch
- 15.12 Electrical fuel gauge

16. SWITCHES AND GAUGES:

- 16.1 Standard instruments and gauges, illuminated
- 16.2 All switches and gauges shall be clearly identified
- 16.3 Tachometer
- 16.4 Air resistor gauges
- 16.5 Hour meter
- 16.6 Transmission Temperature Gauge
- 16.7 3 O.E.M. switches mounted in dash for add-on lights etc.

17. ACCESSORIES:

- 17.1 Air horn, single
- 17.2 Cab-grab handles right and left
- 17.3 Dual W.C. heated mirrors with heavy-duty adjustable type, 16" x 6" minimum with both left and right hand 8" convex mirrors
- 17.4 Automatic back-up alarm when transmission is in reverse

18. FUEL SYSTEM:

- 18.1 Aluminum, 50-gal capacity, minimum. Mounted left-hand side, cab step type fuel tank
- 18.2 Tank shall have non-skid steps
- 18.3 Tank shall provide adequate road clearance, and be properly vented
- 18.4 Flexible wire braid fuel and lube lines, Aeroquip© or acceptable equal
- 18.5 Fuel line primer pump

19. FILTERS:

- 19.1 Air filters shall be dry type, self-evacuating, Donaldson Cyclopac© or approved equal. Local modification is not acceptable.
- 19.2 Air inlet shall be under engine hood; by-pass type
- 19.3 Filter must be located for ease of servicing, external type preferred
- 19.4 Full flow oil filter, 2-qt. capacity, minimum
- 19.5 Primary and secondary fuel filter, one of which shall have rating of microns maximum
- 19.6 Disposal oil and fuel filter elements preferred
- 19.7 All filters furnished must be approved by engine manufacturer
- 19.8 First Service filters will be supplied with Vehicle
- 19.9 5 lb. fire extinguisher mounted in cab
- 19.10 One set of safety triangles

20. COLOR:

- 20.1 Truck shall be Orange S/W 42139 (or equivalent) - primed and undercoat protection

21. MANUALS

- 21.1 One (1) copy "Driver's Manual"
- 21.2 One (1) copy "Parts Book", complete with all accessories items
- 21.3 One (1) copy "Shop Manual"

Note: Vehicle and accessories offered must conform to applicable Federal and State of Maine laws.

ACCESSORY EQUIPMENT – SUBORDINATE BID SPECIFICATIONS

DUMP BODY, PLOW AND GEAR ACCESSORIES

DUMP BODY / SIDE DUMP SANDER :

- 10' 8 gauge hi-tensile Construction
- 26" sides, 36" gate, 4" cross members
- Hardwood risers, painted black
- Full-depth Rear Corner Post
- 6-panel Tailgate, Air operated
- Class 50 D.A. underbody hoist with detent
- Boxed top rail with half cab shield
- Stop, tail, turn L.E.D. lights mounted in rear dump body posts
- Two (2) strobe lights, mounted to the side of head board
- All exposed wiring for strobe lights shall be shielded with steel conduit
- Box in rear frame rails w/pintle plate and hitch

PLOW GEAR:

- Power tilt front plow hitch with push plates and wing tower with trip block that will accommodate American©, or equivalent, style reversa-cast plow
- High mount patrol hitch to accommodate American©, or equivalent, style wing setup
- American©, or equivalent, 11' wing with 10' edge
- Safety chain to hook to the wing to hold it in the up position
- A step mounted on the left side of front plow hitch, to allow operator capability to climb up to check engine oil
- Plow - American©, or equivalent, 11' Ploy Hydraulic Reversible Plow (39" height)

HITCH AND WING SYSTEM SPECIFICATIONS:

- Structural members, plow hitch & vertical angles shall be 4" x 4" x 3/8"
- Horizontal angles shall be 4" x 4" x 1/2"
- Cross tubes for wing post shall be 4" x 6" on top and 4" x 6" on bottom
- Front wing post shall be 8" beam, cable over pulley design
- Rear wing post shall be 10" beam, cable over pulley design
- Trip mechanism shall have 1" face plate

HYDRAULICS:

- Rexroth Load Sense A10© hydraulic pump with Rexroth MP-18© Load Sense valves
- 7 valves to be mounted in weatherproof box on side of frame
- All controls to be cab mounted Del Hydraulics© air controls, or equivalent.
**Note - Location of all valves and controls shall be approved by a designated representative of the Waterville Public Works Department
- Hydraulic tank mounted behind cab on top of frame rails
- Hydraulic Filter, screen type, inside of hydraulic tank
- Stainless steel tubing on long runs
- Cirrus Spreadmart© for sander and hydraulic pump for liquid calcium chloride

ELECTRICAL:

- Standard trailer receptacle to be mounted at rear of truck. Plug shall be wired for, running lights, turn signals, and ground speed controller.
- Weatherproof junction box mounted to rear cross member of the chassis.
- All taillights, work lights, trailer plug and backup alarm should be wired to the junction box.
- All electrical connection should be soldered and wrapped with heat-shrink tubing.
- LED plow lights
- LED wing light mounted on low patrol mount
- LED spinner light

MISCELLANEOUS:

- Mud Flaps – Front & rear of rear tires
- Paint – headgear black, patrol wing, push arms and mount shall be painted black. Wing & dump body same as truck – Orange S/W 42139 (or equivalent).
- Shovel holder for square point shovel to be mounted to front of dump body, left side – see customer for details
- Cirrus Spreadmart© system and the liquid calcium system will need to be calibrated to our specifications by the bidder at the Public Works Garage.
- Back up camera (Part # - 1ZD3221 – SYS-322-1 Zone Defense)
- Wing camera (Part # - 1ZD313C – Camera Zone Defense)

PAINT - Primer coat to be minimum of two (2) applications rust resistant.
Finish coat to be minimum two (2) applications Orange S/W 42139 (or equivalent).

INSTALLATION - By Bidder. To commence upon delivery of truck chassis by dealership and returned to Public Works Department.

TRAINING - Bidder shall supply a minimum of four (4) hours on-site training.

WARRANTY - Manufacturer's Standard.

SPECIAL

CONDITIONS - OEM parts, service and operator's manuals to be provided.

MAINTENANCE

SUPPLIES - Two (2) extra sets of the following shall be furnished:

- a. Wing Edge
- b. Moldboard Edge - Carbide
- c. All Shoes

BID FORM

DATE: _____

To the Director of Public Works for the City of Waterville, Maine:

Please accept this bid submission from

(hereinafter called "Bidder"), a corporation* organized under the laws of the
State of _____ or a partnership/individual** doing business as:
_____.

This bid is being submitted for a **HEAVY-DUTY DIESEL POWERED 4X2 PLOW TRUCK (37,000 GVW MINIMUM) WITH ACCESSORY EQUIPMENT** in compliance with your invitation for bids, having examined the specifications and conditions contained therein.
Alternatives/Substitutions are as follows:

(Attach Additional Comments, As Necessary)

The Bidder proposes to supply the following:

Bid Option #1: One (1) HEAVY DUTY DIESEL POWERED 4X2 PLOW TRUCK (37,000 GVW MINIMUM) WITH ACCESSORY EQUIPMENT (Per Specifications)

Without Trade-In \$ _____

Trade-In Allowance:

1991 GMC 7500 Rack Dump Body \$ _____

1988 Ford F800 Tanker Truck \$ _____

Extended Warranty: Provide Description Summary \$ _____

**Delivery Guaranteed within _____ days of contract award and not beyond ninety (90) days of contract award.

NAME OF BIDDER: _____

BY: _____

(Signature)

NAME AND TITLE: _____

ADDRESS: _____

TELEPHONE: _____ TAX ID# _____

* Affix seal if by Corporation

**Cross out word/phrases that do not apply